TOF HV Shutdown Plans

- HW:
  - Not homogeneous CAEN firmware on the 3 crates:
    - Crate 1: 3.12, Crates 2&3 3.19 →Latest: 3.27
    - Crate with oldest firmware revision generate most of the Smacs errors (see next slides)
    - We will update software on the 3 crates to the latest release:
      - better crate/boards diagnostic → hw monitor of boards failures
      - According to CAEN better stability with fully loaded crates
    - Spare crate not upgradeable:
      - Will be replaced with a spare crate we have in Rome (upgradeable)
  - One of the boards in crate 1 (board 2) is the source of most monitor errors:
    - Will be replaced with a spare one and sent to experts (@FNAL) to be fixed
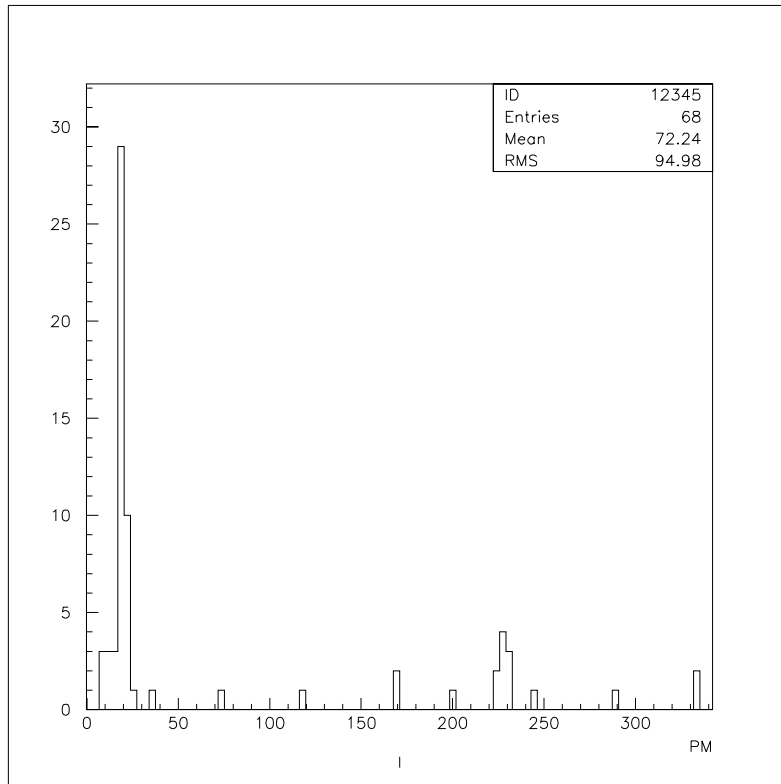
- SW:
  - Main missing features:
    - Not adequate diagnostic:
      - output monitor log file will be completely revised
    - Better filtering for fake alarms:
      - check any alarm before to be sent to the control room
      - expected to reduce also fake inhibit rate
    - Revised procedure when a given channel fails to turn on:
      - Automatically try to reset internal trips and repeat the operation in case of failures
  - iFix (iFix server and Smacs_iFix client) side:
    - Very unstable sometime:
      - iFix will be upgraded to the latest release
      - Should be transparent to Smacs (only re-link libraries)
    - Very slow update of the full DB (2-3 min):
      - This is probably due to the way Smacs_iFix_client is updating the iFix DB tags (one at a time → slower part is open/close DB connections)
      - We will move to a block writing (expect to write 5K tags/4 sec)
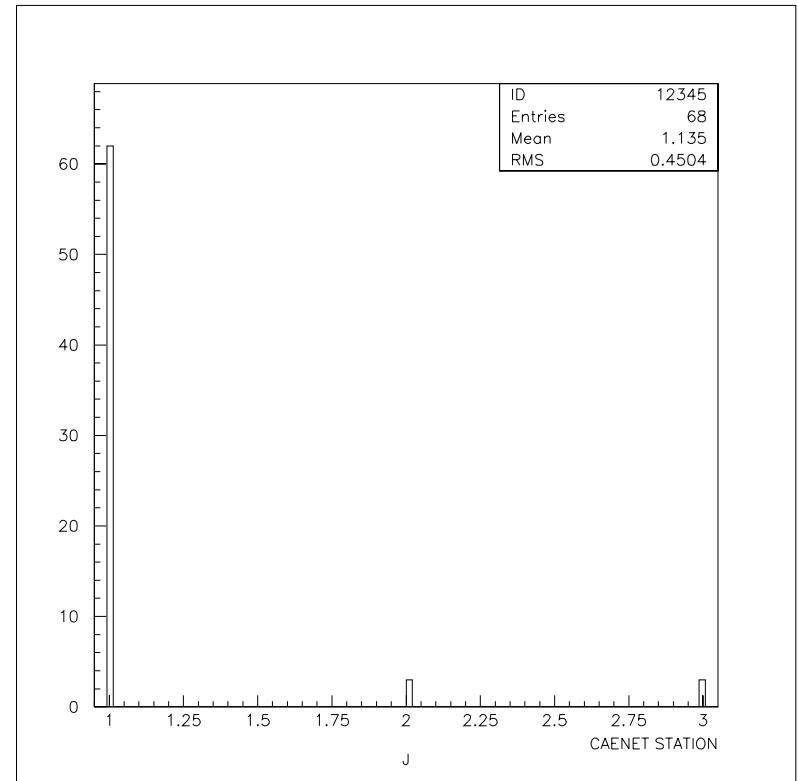
Smacs Monitor Log File Survey

- Check warning/error entries in the smacs monitor log file
- Match with entries in the online e-log
    - 60% of the e-log TOF error entries matched
    - 40% not matched (no warning/alarms in Smacs)
    - 30% of Smacs warning/errors not matched with e-log (no e-log entries)
- ~70% of the Smacs errors related with one of the HV Boards:
    - Crate 1, board 2, channels 8,12 (PM ~20 and ~230)
    - Will be replaced during shutdown

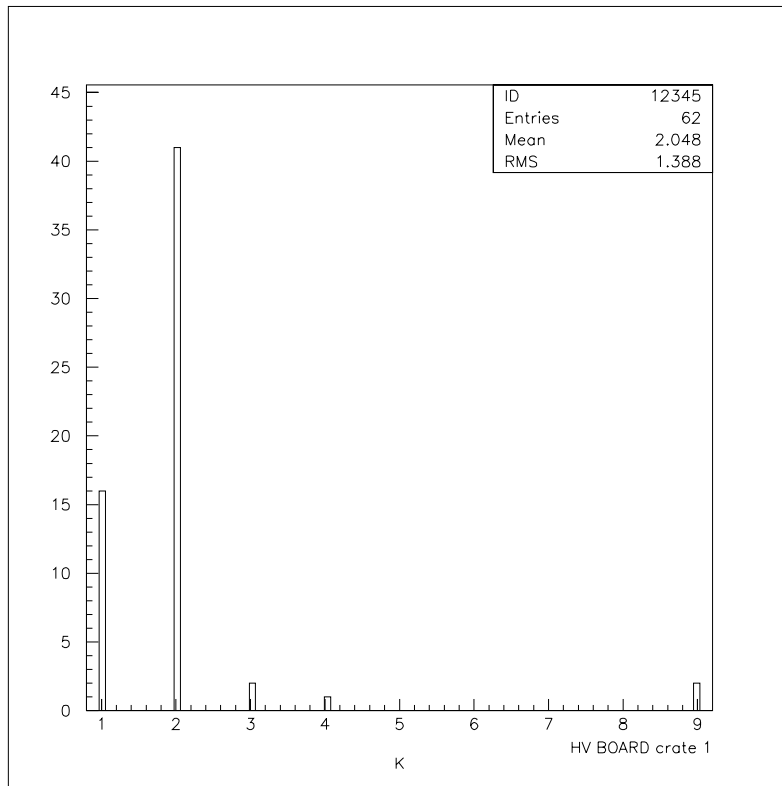# TOF problematic HV board

Errors by PM

Errors by Crate

TOF problematic HV board (2)

Errors by Board # in Crate 1

Errors by Channel # In board 2 crate 1